A STUDY TO ASSESS THE EFFECTIVENESS OF ART THERAPY ON ANXIETY LEVEL AMONG HOSPITALIZED CHILDREN IN SELECTED HOSPITAL, CHENNAI

DISSERTATION SUBMITTED TO

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI - 600 032.

In partial fulfillment of the requirement for the degree of

MASTER OF SCIENCE IN NURSING

APRIL - 2016

Internal Examiner:

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LIST OF ABBREVIATIONS

CNE	Continuous Nursing Education
WHO	World Health Organisation
NINR	National Institute of Nursing Research
SF-MPQ	Short-Form McGill Pain Questionnaire
ICN	International Council of Nurses

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ABSTRACT

STATEMENT OF THE PROBLEM

"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children in selected Hospital Chennai"

OBJECTIVES OF THE STUDY

- Assess the pre-test level of Anxiety among hospitalised children in experimental group before Art Therapy.
- Assess the post-test level of Anxiety among hospitalised children in experimental and control group .
- Assess the effectiveness of art therapy on post test anxiety level between the experimental and control group
- Associate the selected demographic variables with the pre and post test level of anxiety among hospitalized children in both experiment

METHODS

A true experimental design was adopted for this study. A review of literature was done on studies related hospitalized anxiety, studies related to art therapy and studies related to anxiety and art therapy. The conceptual framework opted for this study was based on the model of General System Theory of Karl Ludwig Von Bertalanffy, in order to achieve the objectives of the study. The Research design adopted was pretest posttest control group design. The tool adopted for the study is standardized "Five facial anxiety scale". The tool was validated by 4 experts.

A pilot study was conducted before under taking the main study. The main study was conducted in Chettinad Hospital, Kelambakkam, Chennai, among 60 children. Simple random sampling technique was

used to select 30 children into experimental group and 30 children into control group. The study lasted for a period of 4 weeks during which, the first and second weeks subjects were taken as experimental group and in the third and fourth weeks subjects were taken as control group, Art therapy at the duration of 20 minutes/day for 3 days. Demographic data was collected from the subjects. The data was analyzed by descriptive and inferential statistics, the hypothesis was tested, the objectives were achieved and the result was presented.

MAJOR FINDINGS OF THE STUDY

The findings of the study revealed that in the pretest, majority 17(56.67%) of children had very high level of anxiety and 13(43.33%) had high level of anxiety in the experimental group and whereas in the post test after the Dot Drawing Art therapy majority 21(70%) had little anxiety and 9(30%) had no anxiety in the experimental group.

Furthermore in the pretest, majority 18(60%) of children had very high level of anxiety and 12(40%) had high level of anxiety in the control group and whereas in the post test, majority 17(56.67%) had high anxiety and 13(43.33%) had very high anxiety in the control group.

The result showed that the post-test mean score of anxiety among hospitalized children in the experimental group was 0.70 with S.D 0.46 and the post-test mean score of anxiety among children in the control group was 3.43 with S.D 0.50. The calculated unpaired ‘t’ value of $t = 21.808$ was found to be statistically significant at $p<0.001$ level. This clearly indicates that after the administration of Dot Drawing Art Therapy among hospitalized children in the experimental group there was a significant reduction in the level of anxiety than the hospitalized children in the control group who underwent normal hospital routine measures.

The demographic variables of the hospitalized children had shown no statistically significant association with the post-test level of anxiety among hospitalized children in the experimental group.

CONCLUSION

This study highlighted the effectiveness of art therapy in reducing anxiety among hospitalized children, and thereby improves the quality care during hospital stay. Study findings showed that after the administration of Dot Drawing Art Therapy among hospitalized children there was a significant reduction in the level of anxiety and thus promoted the cooperation of children with nurses.

Anxiety is one of the most common experiences of every hospitalised child; it adversely affects the course of hospital stay and affects the quality of nursing care as well. Art therapy reduces the anxiety in the hospitalised child.

Thus nurses can give art therapy to children who are hospitalized, as it is one of the best, non-pharmacological and cost effective intervention proved to reduce anxiety among hospitalized children.

INTRODUCTION

"If you want to conquer the anxiety of life, live in the moment, and live in the breath"

(Amit Ray)

Children are a blessing from the Lord. They are like clay in the potter's hand. Blend them with godly love and care, they become a vessel that stays strong and perfect, purge them with toil and dust they may break and crumble. They build the nation sound and strong, because today's children are responsible citizens of tomorrow.

Today's society is complex and ever changing. As children grow, they learn each day, of how to live tomorrow watching the grace and disgrace that surround them. The more you blend your child with confidence the lesser he tumbles and the better he becomes.

A sick child needs hospital care and it is a stressful experience for him, well the hospital environment and the related procedure make the feel child scary of even more Hospital care thus puts such emotional drawbacks on the child's regular life. The child is displaced from daily routine of home and brought into an unfamiliar setting causing loss of contact with siblings, peers and relatives.

American library association (1945) spearheaded the focus on services to hospitalized children. Library standards were created that were endorsed by the American Hospital association. The use of books and drawing materials for the therapeutic purposes is known as "Art therapy".

Hospital care may be an emotional and developmental set back to the child. It causes anxiety due to imbalance between environmental and societal demands and child's coping abilities. The child in hospital may have to undergo various diagnostic and therapeutic procedures. Hospital care leads to altered nutritional and sleep pattern of the child.

Moreover the strange environment of hospital leads to reduced appetite and causes anxiety in the child. The hospital environment may be Greek and Latin with white collars around. Also daily routine may be disturbed due to higher noise level in the ward. This alteration in the environment leads to distress in children.

During Hospital care children are concerned with fear, worry, fantasies, modesty and privacy. They react with defence mechanisms like regression, separation anxiety, negativism, depression, phobia, unrealistic fear, suppression or denial of symptoms and conscious attempts of mature behaviour. Because of their striving for independence and productivity, children are particularly vulnerable to events that may lessen their feeling of control and power.

Children in hospital care may experience high level of anxiety due to many different factors both physical and psychological. It is not surprising that up to 65% of children experience significant anxiety associated with the hospital stay period.

Mohammad I Ahmed (2011) Stated Hospital anxiety is an extremely unpleasant sensation for children. Some may vocalize their fears while others manifest it in behaviour such as crying, agitation and cessation of conversation or play and even attempting to escape from care providers. This is accompanied by significant physiological changes such as increase in heart rate and secretion of stress hormones.

Taylor (2010) Art therapy is guided reading of written materials to help the children relieve anxiety suggested using colour pencil and paper for patients to help them relief stress.

1.1 BACKGROUND OF THE STUDY

The paediatric population in hospital today has changed dramatically over the last 2 decades. Although there is a growing trend towards shortened hospital stays and outpatient surgery, a greater percentage of children's hospital today have more serious and complex problems than those hospitals staying the past.

Children are afraid of doctors, nurses and generally health workers and hospital routines. In other words they have white uniform phobia often associated with that which is called as white collar syndrome. Moreover they are afraid of medical procedures such as vaccination or injection. These medical procedures increases level of anxiety in children.

Treatment process can cause considerable stress and anxiety that can have a profound effect on children. It is crucial for nurses to differentiate hospital anxiety levels in children and to identify those children who are most likely to exhibit high levels of anxiety when undergoing procedure before any intervention appropriate measure and reduce anxiety can be planned, provided and evaluated.

According to Chettinad Hospital statistics about from 15 December 2014 to 15 January 2015, almost every month more than 200 children come to hospital as inpatient.

1.2 NEED FOR THE STUDY

Nisha k (2013) estimates in India approximately 3 million of children admitted in hospital, in Tamil Nadu. 18000 children admitted annually, among them boys are more than girls and the ratio is 7:46 up to 25% of children have been noted to require physical restraint. Loss of freedom can produce stress and anxiety in children.

Umarani J (2013) Hospital can be a threatening experience for everyone, especially for children. Hospitalized children may experience high level of anxiety due to many different factors both physical and psychological. It is not surprising that up to 65% of children experience significant anxiety associated with the preoperative period.

Lazarus (2012) describe anxiety as an intense, unpleasant emotional state there are two main symptoms of anxiety. Physical and psychological symptoms are palpitation, tremors, dizziness, nausea, fatigue and insomnia. Psychological symptoms are tension, nervousness, fear, irritability, agitation, restlessness and difficulty in concentration. The lack of appropriate information provided about treatment and other hospitalization-related aspects increases anxiety and uncertainty.

M.C.Cann&Kain (2012) reports of the incidence of Hospital anxiety in children have varied over the years but are estimated at around 60% of children, a range that is apparently consistent regardless of country, medical procedure, or health care system. Hospital anxiety affect the mind and release of stress hormones, which can hinder recovery.

Squires (2011) specifics the aspect of the hospital experience that produce stress for children include,

(a) Unfamiliar faces, places, and routines.

(b) Hospital food, clothing, and play.

(c) Exposure and touching of "private parts" by strangers.

(d) Medical jargon.

(e) Pain and shame and

(f) Witnessing of parental anxiety.

According to **Vooper VDand PerryJN (2010)** more than 5 million Children in the United States admitted in hospital annually. Out of which, 50% to 75% experience considerable fear and anxiety. In hospital creates regressive behavioural disturbances, such as nightmares, separation anxiety, eating disorders, and bedwetting. Children are most susceptible to the stress to children owing to their limited cognitive capabilities, greater dependence on others, lack of self-control, limited life experience, and poor understanding of the health care system.

Thibault, (2004). “Art therapy” define as the use of draw materials to gain understanding and engage in problem solving relevant to the person's therapeutic needs has been explored as a successful method in communicating illness to pediatric patients

During the clinical posting, the investigator witnessed the situations like anxiety in children and difficulties faced by the staff nurses those who are taking care of them and while reviewing the literature the investigator came across studies in relation to Art therapy and it’s effectiveness which reduces anxiety of the children. Many studies carried out in foreign settings whereas very few studies are found in India, thus the investigator has motivated to carry out this study.

1.3 STATEMENT OF THE PROBLEM

"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children in Chettinad Hospital Chennai"

1.4 OBJECTIVES OF THE STUDY

The study aims to

- Assess the pre-test level of Anxiety among hospitalised children in experimental group before Art Therapy.
- Assess the post-test level of Anxiety among hospitalised children in experimental and control group .
- Assess the effectiveness of art therapy on post test anxiety level between the experimental and control group
- Associate the selected demographic variables with the pre and post test level of anxiety among hospitalized children in both experiment

1.5 OPERATIONAL DEFINITIONS

EFFECTIVENESS

Refers to the extent to which the Art therapy reduces the Anxiety level among hospitalised children.

ART THERAPY

Refers to providing the child with a crayons and colour pencil during hospital stay to draw a picture by connecting the dots that when connected together gives a picture. Art therapy gives 20 minutes per day for three days.

ANXIETY LEVEL

Refers to fear and concerns of children regarding hospitalisation measured facial five anxiety scale

HOSPITALISED CHILDREN

Refers to children between the age group of 7-12 years admitted in paediatric medical ward 1day after of admission in Chettinad hospital, Chennai.

1.6 RESEARCH HYPOTHESIS

H_1: There is a significant difference between the pre and post test level of anxiety among hospitalized children in experimental and control group.

H_2: There is a significant association in the post test level of anxiety among hospitalized children in experimental group with the selected demographic variables.

1.7 ASSUMPTIONS

1) Anxiety more prevalent among school age hospitalised children.
2) Art Therapy may reduce anxiety among school age hospitalised children.

1.8 DELIMITATIONS

1) The study was limited to four weeks.
2) The findings of the study is limited only for the hospitalized children

1.9 CONCEPTUAL FRAMEWORK

A Conceptual framework refers to frame work of prepositions for conducting research. Conceptual framework serves as a spring board for theory development. This study is based on theory

The Karl Ludwig Von Bertalanffy was an Austrian born biologist known as one of the founders of general systems theory.

The researcher adopted the Conceptual framework based on Ludwig Von Bertalarffy's general system theory (1972).

General System Theory, therefore, is a general science of 'wholeness'.

There is a general tendency towards integration in the various sciences, natural and social.

Such integration seems to be centered in a general theory of systems.

Such theory may be an important means of aiming at exact theory in the nonphysical fields of science.

Developing unifying principles running 'vertically' through the universe of the individual sciences, this theory brings nearer to the goal of the unity of science.

This can lead to a much-needed integration in scientific education.

They are open because there is an ongoing exchange of matter, energy and information. In general system theory, the systems are composed of both structural and functional components that interact with in boundary, which filter the type and rate of exchange with the environment. A structure refers to the arrangements of the part at a

given time whereas function is the process of continuous change in the system as matter, energy and information.

For survival a system must achieve a balance internally and externally. Equilibrium depends on the system's ability to regulate input and output to achieve a balanced relation of the interactive part and the process applied for proper balance. The system uses various adaptation mechanisms to maintain equilibrium. Adaptation may occur through accepting or rejecting the matter, energy or information or by accommodating the input and modifying the system responses.

Ludwig Von Bertalarffy's general system theory focused on three areas.

Input

Throughput

Output

INPUT

According to general system input refers to the matter, energy or information from the environment into the system. Here the input includes subject, age, gender, religion, education of the child, duration of hospitalization, presence of caregiver with the child, play activities of the child during hospitalization, and pretest level of Hospitalized anxiety in both groups assessed by using Five and Three Anxiety Scale.

THROUGHPUT

In this model throughput refers to the procedure by which matter, energy and information that is modified or transformed within the system. In the present study it includes “art therapy” in experimental group and hospital routine care for control group.

OUTPUT

Output refers to matter, energy and information that are released from the interaction of the system into the environment. In the present study it involves posttest level of Hospitalized anxiety in both groups followed by reduction of Hospitalized anxiety in experimental group and Hospitalized anxiety not reduced in control group using Five and Three Anxiety Scale.

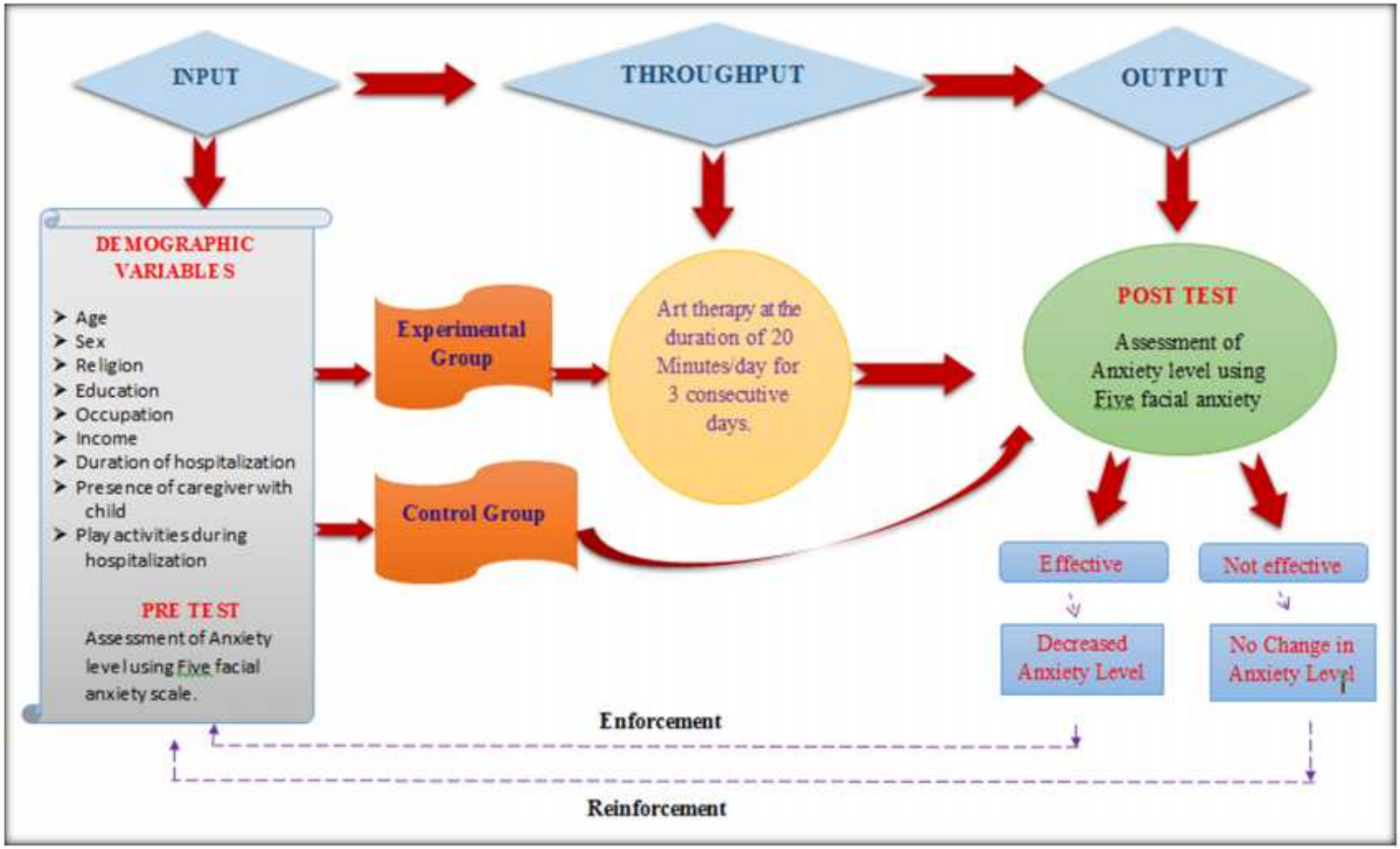

FIGURE 1: CONCEPTUAL FRAME WORK: MODIFIED LUDWIG VON BERTALANFFY'S GENERAL SYSTEM THEORY (1972)

1.10 OUTLINE OF THE REPORT

Chapter 1 **:** Dealt with background of the study, need for the study, and statement of the problem, objectives, operational definition, research hypotheses, assumptions, conceptual framework and delimitations of the study.

Chapter 2 **:** Deals with review of literature

Chapter 3 **:** Presents the methodology of the study and plan for data analysis

Chapter 4 **:** Focuses on data analysis and data interpretation

Chapter 5 **:** Enumerate the discussion of the study

Chapter 6 **:** Gives the summary, conclusion, implication, limitations and recommendations for the study

REVIEW OF LITERATURE

A literature review surveys existing research from scholarly articles, books, dissertations and conference proceedings that are relevant to the area of study. A literature review is not a summary; rather it is an evaluation of each work. It seeks for the relationships between different works and how they relate the present study.

The literature is classified into four sessions

i) Literature related to Hospitalized anxiety.
ii) Literature related to Art therapy.
iii) Literature related to Anxiety and Art therapy.

(i) Literature related to Hospitalized anxiety

Spielberger, (2012) this research study examines the fears of 82 children between the group ages 8 to 11 years as self-reported on the Child Medical Fear Scale (CMFS) (Broome, Hellier, Wilson, Dale, & Glanville, 2012). The variables of age, gender, yearly income level, health status (acute or chronic), and the score were examined.. Children with higher trait anxiety and from families with lower yearly income reported a higher level of fear. Pediatric nurses are encouraged to perform fear assessments and provide individualized interventions that anticipate fear reactions in hospital care.

NazaninVaezzadeh, Zahra Esmaeeli, (2011) conducted a study on Effect of Performing Hospilalized children Preparation Program on School Age Children's Anxiety at AmirkolaPediatrics Hospital, Mazandaran. A RCT was performed on 122 children (7-12 years of age) admitted for elective surgery during 15 months. The researcher randomly assigned experimental and control groups. The experimental group received therapeutic play and the control group received routine

preoperative preparation. The state anxiety score was lower significantly in the experimental group prior to preoperative surgery than in the control group (P=0.000).

Zeen.N, Kain.MD, (2010) conducted a study in Center for the advancement of preoperative health and departments of anesthesiology at Yale University School of Medicine, They selected 241 children age with the group of 5 to 12 years scheduled to undergo treatment. Child was assessed before and after hospital stay . After 24 hours in the hospital, children were discharged and followed up at home for the next 14 days. Results showed that children experienced significantly more pain during hospital stay and over the first 3 days at home. During home recovery, anxious children consumed, more codeine and acetaminophen compared to the children, who are not anxious. Anxious children also had a higher incidence of emergence delirium compared with the non-anxiety children

P. Hatava, G.L. Oisson, (2010) conducted a study on preoperative and hospitalized psychological preparation for child ENT operation. A psychological preparation programme was developed. The purpose was to determine if the programme could increase retrieval of information and reduce anxiety. 160 children and their parents were included. Eighty children (group 1) received conventional verbal information, and another 80 children (group 2) received **specific information**,. Children's and parents' experience of premedication, operation theatre (OR), IV needle insertion and induction of anaesthesia were evaluated with **questionnaire**. The questionnaire included ratings with information and care. The results indicated a clear improvement of the preoperative acquisition of knowledge in **all age groups**. When it comes to alleviation of fear, **a positive effect** of the preparation programme was noticed, especially among the younger children (< 5 years), while preoperative anxiety overall was a significantly lesser

problem among the older children. Overall, the most negative procedure reported by the children was the I.M. injection for premedication (a routine which was abandoned as a result of the study), followed by the insertion of the IV needle.

Zeev.N.Kain, Alison.A, (2009)conducted a randomized controlled trial on family-centered preparation for surgery Improves hospitalized Outcomes in Children. Children and their parents (n = 408) were randomly assigned to one of four groups: (1) control: received standard of care; (2) parental presence: received standard parental presence during induction of anesthesia; (3) advance: received family-centered behavioral preparation; and (4) oral midazolam. The authors assessed the effect of group assignment on preoperative anxiety levels and postoperative outcomes such as analgesic consumption and emergence delirium. Results indicated that Parents and children in the advance group exhibited significantly lower anxiety in the holding area as compared with all three other groups (34.4 ± 16 *vs.* 39.7 ± 15; *P* = 0.007) and were less anxious during induction of anesthesia as compared with the control and parental presence groups (44.9 ± 22 *vs.* 51.6 ± 25 and 53.6 ± 25, respectively; *P* = 0.006).

Barbara Faye Ferguson (2009) conducted a study on preparing young children for hospitalization in department of paediatrics at Canada, Study examined two methods of preparing children aged 3 to 7 years for hospitalization. One method was a preadmission home contact by a nurse. The second was a filmed modelling sequence shown on admission. The effectiveness of each condition in reducing anxiety in the children and mothers was examined separately and in combination. The results indicate that a preadmission visit contributes to the lessening of maternal anxiety during and after the child's hospitalization. A preadmission visit was also associated with reduction in the incidence of

negative post hospital behaviour particularly with the 6- and 7-year-olds.

P.J. Shirley, N. Thompson, (2008) conducted a study on parental anxiety before elective surgery in children at Royal Aberdeen children's Hospital. Anxiety levels were quantified using **the Leeds scale** for self-assessment of anxiety. The aim of the study was to measure anxiety levels in parents of children admitted for elective surgery, to identify specific causes and possible relieving factors and to make some comparison with similar studies performed elsewhere in the world. Results showed that forty-two per cent of parents were significantly anxious. Mothers were identified as being more pathologically anxious than fathers.

Fosson A, Martin J (2008) conducted a study on anxiety level among hospitalized latency age children at department of paediatrics, college of medicine, university of Kentucky. They investigated the following three assumptions regarding **anxiety** in hospitalized children: (1) anxiety decreases during hospitalization, (2) anxiety correlates with symptoms, procedures, and **parental anxiety**, and (3) anxiety is reduced following guided play with real and simulated medical equipment. Fifty latency-age children and their parents were studied. Anxiety was measured by self-report, parental report, nurse's report, and direct observation. Potential correlates were monitored daily by review of patient care records, and interviews of primary nurses and parents. Hypothesis one was confirmed; anxiety decreased significantly (p less than 0.001) across the four assessments. Hypothesis two was confirmed; symptoms, procedures, and parental anxiety accounted for 27-30% of the variance in children's anxiety. Hypothesis three was not confirmed; anxiety decreased following guided play, but not enough to reach statistical significance.

Ze'ev Shenkman (2008) conducted a descriptive study to assess the effectiveness of pre-operative magic tricks performance on pre-operative anxiety among 54 children between the age group of 3 and 12 years and concluded that reduction in the pre-operative anxiety was associated with children shown with pre-operative magic tricks.

Anuradhapatel (2007) conducted a study on distraction with a hand-held video game reduces pediatric hospitalized anxiety at university of medicine and Dentistry of New Jersey, Newark. To evaluate the effectiveness of distraction with a hand held drawing among 112 children aged 4-12 years during the period of hospitalization. The results shown that children had a decrease in anxiety level after the intervention.

Constance S (2007) conducted a study to assess the level of anxiety among hospitalized children 110 boys aged 3 to 6 years old who have to undergone circumcision been studied. The children were assigned to one of two groups, depending on their attitude: the anxious and calm group. The study concluded that 20 out of 27 boys in the anxious group showed significantly greater incidence of problematic behavior when compared to 5 of 79 in the calm group.

(ii) Literature related to Art Therapy

Aleksandra S. Dain et.al (2014) Complementary and alternative medicine (CAM) provides clinical benefits to hospitalized patients, including decreased pain and improved quality of life. Twenty-nine percent of hospitalized (169 of 591) reported employing an art, massage, or music therapy. Of those hospices, 74% employed a massage therapy, 53% a music therapy, and 22% an art therapy, and 42% expected the therapy to attend interdisciplinary staff meetings, indicating a significant role for these therapy on the patient's care team. In the

analyses, larger Forty-four percent of hospitalized in the Mountain/Pacific region reported employing a CAM therapist vs. 17% in the South Central region.

D.Kaiser, (2013) Painful procedures endured by children with leukemia may be alleviated by art therapy. It is thought that this nonverbal, creative modality can help children develop coping skills for dealing with pain. To test whether art therapy prevents anxiety and fear during painful interventions such as lumbar puncture and bone marrow aspiration. Method adopted was Experimental design comparing a group who received art therapy protocol with a previous treated group of children who received no service Setting Medical. Study Participants 32 children aged 2-14 years with leukemia. Results & Conclusions: Art therapy appeared to promote more cooperative behavior during painful interventions.

Thompson,L.J. M (2013) Art therapy involved152in-patient general health care patients. The Pre and post tests were the Positive Affect Negative Affect Scale and the Visual Analogue Scale. Semi structured interviews were also employed. Two groups were compared where the experimental group handled objects from museums (tactile condition) and the comparison group looked at pictures of these objects (visual condition). The results revealed significant increases in wellbeing and happiness and decrease anxiety an advantage for the tactile condition over the visual one.

Belkofer, C. M., (2011) Art therapy study presents a modified, single subject design that measure the patterns of electrical activity of a participant's brain following an hour spent painting and drawing. Paired t tests were used to compare pre and post art-making electroencephalograph (EEG) data. The results indicated that neurobiological activity after drawing and painting was statistically

different ($p<.05$) from activity measure data rate of rest. In general, the higher frequency bands (alpha and beta) were characterized by increases in brain activity, whereas the lower frequency bands(delta and theta)showed decreases.

Foster,(2010) In this out comes study (N =40), changes in stress levels were compared across two participant conditions for a period of artistic activity with a cognitive focus on either a personally stressful or positive situation. Results indicated that participants in the positive-focus condition demonstrated a significant decrease in stress, whereas participants in the negative-focus condition demonstrated a slight increase in stress level of ($p<.05$).

Forzoni S (2010) Art therapy has been shown to be helpful to patients at different stages in the course of their illness, especially during hospital stay for treatment, and after treatment. 157 patients in Hospital Siena, Italy met the art therapist during their chemotherapy sessions. The art therapist used the same art therapy technique with each patient during the first encounter; afterward the relationship would evolve in different ways according to the patients' needs. A psychologist interviewed a randomized group of 54 patients after the chemotherapy treatment using a semi structured questionnaire. Out of the 54 patients, 3 found art therapy "not helpful" ("childish," "just a chat," "not interesting"). The other 51 patients described their art therapy experience as "helpful." From patients' statements, three main groups emerged: art therapy was perceived as generally helpful (e.g., "relaxing," "creative"; 37.3%), art therapy was perceived as helpful because of the dyadic relationship (e.g., "talking about oneself and feeling listened to"; 33.3%), and art therapy was perceived as helpful because of the triadic relationship, patient-image-art therapist (e.g., "expressing emotions and searching for meanings"; 29.4%). These data have clinical implications, as they show that art therapy may be useful

to support patients during the stressful time of treatment and reduce anxiety.

Geue K (2010) over the last few years several offers inpatient creative therapy interventions for patients have been developed implemented and researched. This article describes the content, concept and structure of art therapy interventions based on painting or drawing as well as some further methodical procedures and research results of art therapy. Of 56 manuscripts, 17 papers reporting 12 research projects were included. The art therapy interventions differ from each other considerably in their content and structure. The variance in the study design of the papers was also high. More females than males participated in the interventions. The papers dealt with a variety of questions. A total of seven quantitative papers focused on mental health. A decrease in anxiety and depression was noted in six of these. Three papers documented an increase in quality of life. Moreover, four qualitative papers indicated positive effects on personal growth, coping, the development of new form of self-expression, and social interaction. Three papers with qualitative methods investigated participants' mechanisms for coping with their disease.

A.C. Svensk (2009) the study reports the effect of an art therapy intervention among 41 patients undergoing treatment for cancer. The patients were randomized to an intervention group with individual art therapy sessions for 1 h/week (n = 20), or to a control group (n = 21). The WHO QOL-BREF and Quality of Life Questionnaire, were used for QoL assessment, and administrated on three measurement occasions, before the start of radiotherapy and 2 and 6 months later. The results indicate an overall improvement in QoL aspects among patients in the intervention group. A significant increase in total health, total QoL, physical health and psychological health was observed in the art therapy group. A significant positive difference within the art therapy group was

also seen, concerning future perspectives, body image and systemic therapy side effects.

Curry and Kasser,(2009) This study examined the effectiveness of different types of art activities in the reduction of anxiety. After undergoing a brief anxiety-induction, 84 undergraduate students were randomly assigned to color a mandala, to color a plaid form, or to color on a blank piece of paper. Results: ANOVA results demonstrated that anxiety levels declined approximately the same for the mandala- and plaid-coloring groups ($p<.32$). Both of these groups experienced more reduction in anxiety than did the unstructured-coloring group ($p<.001$).

Nancy Nainis (2006) Art therapy has been used in a variety of clinical settings and populations, although few studies have explored its use in hospitalized patients. The specific aim of this study was to determine the effect of a 1-hour art therapy session on anxiety and other symptoms common to hospitalized inpatients. A quasi-experimental design was used (n=50). The Edmonton Symptom Assessment Scale (ESAS) and the Spielberger State-Trait Anxiety Index (STAI-S) were used prior to and after the art therapy to quantify symptoms, while open-ended questions evaluated the subjects' perceptions of the experience. There were statistically significant reductions in eight of nine symptoms measured by the ESAS, including the global distress score, as well as significant differences in most of the domains measured by the STAI-S. Subjects overwhelmingly expressed comfort with the process and desire to continue with therapy. This study provides beginning evidence for the efficacy of art therapy in reducing a broad spectrum of symptoms in cancer inpatients and reduces anxiety.

(iii) Literature related to Anxiety and Art Therapy

Freda .A. Jones (2013) conducted a experimental study on the role of Art therapy in health anxiety. This experimental study investigated the effects of Art therapy on patients who had been identified as demonstrating health concerns. The 40 participants were randomly allocated to two groups, one receiving art therapy and the other not. Half the patients had a medically diagnosed problem. Anxiety was assessed before and after the art therapy intervention. Patients in the art therapy group showed reduced levels of anxiety at post-test, even when they also had an identifiable physical problem. These results are consistent with the idea that self-help materials can be an effective and accessible intervention in reducing anxiety level.

Felter,Puig (2011) conducted a study at department of pediatrics, Oregon, US among 60 children between the age group of 8-13 years for assessing the effectiveness of children's art therapy- handbook for pre surgical preparation in reducing the pre-operative anxiety. The results showed that the art therapy group had a significant reduction in pre-operative anxiety. When analysed the association of demographic variables, age showed a statistically significant in level of anxiety comparing before and after the intervention.

Cutforth, Nancy Bohne(2010) an experimental study was conducted to examine the effect of group art therapy on the anxieties of children in grades one, two, and three. The total sample contained 295 students. Treatments were randomly assigned to the groups. Control Group II received non-Art therapeutic treatment. whereas Experimental Group received Art therapeutic treatment .All children participating in the study were administered a pretest. The instrument used was Sara son's General Anxiety Scale for Children. Each group was read three appropriate books by the investigator each session for ten sessions.

Immediately following the five-week experimental period, a post test was administered to all the children. The study concluded that reading Art therapeutic drawing lessen their anxieties.

McKenna, Heveyd(2010) an experimental study was conducted to evaluate the effectiveness of art therapy on patients with mild to moderate anxiety in primary care. Non-parametric statistical testing of scores from the Zung Anxiety Scale and the Clinical Outcomes in Routine Evaluation (CORE) questionnaire indicated positive results. There was significant improvement at post-treatment. The results from this trial indicate that it is an effective treatment for managing and treating anxiety in primary care.

Kupshik GA, Fisher. CR (2008) conducted a study on effectiveness of art therapy for moderate anxiety disorders among 120 children age between 8 to 12 years. In this study, selected patients were supported in learning skills to manage their symptoms. This approach was efficient, acceptable, and led to clinically significant symptom reduction for a high proportion of patients. This improvement was well sustained at three-month follow-up

RESEARCH METHODOLOGY

Research methodology is the overall plan for addressing the research problem. It covers multiple aspects of the study's structure. It acts as a guide for planning, implementation and analysis of the study. It includes the descriptions of the research approaches, research design, dependent and independent variables, sampling design, sampling criteria, description of the tool, pilot study, and a planned format for data collection and a plan for data analysis.

3.1 RESEARCH APPROACH

The research approach used in this study was Quantitative research approach in accordance to the nature of the problem and to accomplish the objectives of the study.

3.2 RESEARCH DESIGN

The design selected for this study is true experimental design to assess the effectiveness of Art therapy on anxiety among hospitalized children in selected hospitals at Chennai.

RE	O_1	X	O_2
RC	O_1	-	O_2

Key:

RE	-	Randomized experimental group
RC	-	Randomized control group
O_1	-	Pre-test for both experimental group and control group
X	-	Intervention to experimental group (Art therapy)
-	-	No intervention
O_2	-	Post test for both experimental group and control group

.

3.3 VARIABLES

3.3.1 Independent Variable

The independent variable of this study was Art therapy.

3.3.2 Dependent Variable

The dependent variable of this study was hospitalized Anxiety among children.

3.3.3 Extraneous variables

- The extraneous variables of this study include age, sex, religion, education of the child, father's education, mother's education, father's occupation, mother's occupation, family income, presence of caregiver with child, duration of hospitalization, and play activities of the child during hospitalization.

3.4 SETTING

The study was conducted in the Chettinad Hospital, Chennai. The hospital was randomly selected in which the experimental group samples were selected. The control group samples were obtained from the same hospital.

3.5 POPULATION

All the children admitted in the medical ward between the age group of 7-12 years were considered as the population of the study.

3.5.1 Target population

The target population of the study included all the hospitalized children in the age group of 7-12 years.

3.5.2 Accessible population

The accessible population of the study included the hospitalized children between the age group of 7-12 years at selected hospitals.

3.6 SAMPLE

30 Children admitted in the pediatric medical ward at Chettinad Hospital who satisfied the inclusion criteria were allotted to experimental and control group for the first 2 weeks followed by allotment of 30 Children for control group in the following next 2 weeks.

3.7 SAMPLE SIZE

The total number of samples was 60 out of which 30 samples were experimental group and 30 samples were control group.

3.8 CRITERIA FOR SAMPLE SELECTION

3.8.1 Inclusion criteria

- Both male and female 7-12 year children.
- Willingness of the parents and the child.
- Children who are admitted in hospital.

3.8.2 Exclusion criteria

- Children who are mentally retarded.
- Children with hearing impairment.
- Children who are under strict isolation.

3.9 SAMPLING TECHNIQUE

Simple random sampling technique by using lottery method was adopted for both experimental and control group.

3.10 DEVELOPMENT AND DESCRIPTION OF THE TOOL

Section A

Baseline Proforma: This section consists of questions which seek information regarding demographic data such as a Age, gender, religion, education of the child, fathers education, mothers education, fathers occupation, mothers occupation, family income, presence of caregiver with child, duration of hospitalization, and play activities of the child during hospitalization.

Section B

Five facial anxiety scale.

The investigator followed Five facial anxiety scale.

The score were interpreted as given below

- No anxiety = Smiling face
- A little anxiety = Frowning face
- Some anxiety = Frowning and wailing
- High anxiety = Wailing with eyes closed and tears
- Very High anxiety = Frowning with eyes closed with tears wailing and mouth turned down

3.11 CONTENT VALIDITY

The content validity was ascertained from the following field of expertise

Child health nursing specialists - 3

Pediatrician - 1

Statistician - 1

All the modifications were done in the tool, all experts gave their consensus and the tool was finalized.

3.12 ETHICAL CONSIDERATION

The study was approved by institutional Ethics Committee which was held on 04.03.2014 at Venkateswara Nursing College and the ethical principles followed were:

1. BENEFICIENCE

The investigator followed the fundamental ethical principal of beneficence by adhering to

a. The right to freedom from harm and discomfort

The study was beneficial for the participants as it reduced the anxiety by Art therapy.

b. The right to protect from exploitation

The investigator explained the procedures and nature of the study to the participants and ensured that none of the participants in both experimental and control group would be exploited or denied fair treatment.

2. RESPECT FOR HUMAN DIGNITY

The investigator followed the second ethical principle of respect for human dignity. It includes the right to self-determination and the right to self-disclosure.

a. The right to self determination

The investigator gave full freedom to the participants to decide voluntarily weather to participate in the study or to withdraw from the study and the right to ask questions.

b. The right to full disclosure

The researcher has fully described the nature of the study, the person's right to refuse participation and the researcher's responsibility based on which both oral and written consent was obtained from the participants.

3. JUSTICE

The researcher adhered to the third ethical principle of justice, it includes participant's right to fair treatment and right to privacy.

a. Right to fair treatment

The researcher selected the study participants based on the research requirements. The investigator followed hospital routine for control group, during the period of data collection and administered the intervention to the postoperative children in the control group after the completion of post-test.

b. Right to privacy

The researcher maintained the study participant's privacy throughout the study.

4. CONFIDENTIALITY

The researcher maintained confidentiality of the data provided by the study.

3.1.3 RELIABILITY

Reliability of the tool was tested by using split half spearman Brown prophesy formula.

Reliability- 2r/1tr=0.08

During the pilot study, practicability and feasibility were tested and the tool is considered as highly reliable for proceeding with the main study.

3.14 PILOT STUDY

The ethical clearance was obtained from Venkateswara Nursing College ethical committee. After getting content validity from Nursing and Medical experts, the pilot study was conducted in Chettinad Hospital Chennai.

A sample of six children who met the inclusion criteria were selected by simple random technique. The investigator introduced himself to the subjects and socio-demographic data was collected from each subjects. Pre-test was conducted for both the group using Five Facial Anxiety Scale. On the same day Art therapy was given for 20 minutes/day to the experimental group for 3 consecutive days. The post test was conducted for both the groups. The results were analyzed based on the scores obtained using Five Facial Anxiety Scale.

3.15 PROCEDURE FOR DATA COLLECTION

After obtaining the permission from the Dean of Chettinad University and HOD of pediatric department, the main study was conducted. The children were selected using simple random technique using lottery method in the pediatric medical ward of Chettinad Hospital and were allotted as experimental and control group. The investigator introduced himself to the subjects and developed good rapport with them. Confidentiality was maintained for each sample while collecting data from each child. Pretest pain score was assessed both in experimental and control group by using Five Facial Anxiety Scale. Each hospitalized children was given Art therapy at the duration of 20 minutes/day for 3 consecutive days for the experimental group whereas the control group received routine care. The post test of pain in experimental and control group were assessed on the third day using Five Facial Anxiety Scale. Each day 6-8 samples were given Art therapy. The collection of data was performed within the stipulated time of 4 weeks.

3.16 PLAN FOR DATA ANALYSIS

Both descriptive and inferential statistics were used to analyze and interpret the data.

3.16.1 Descriptive Statistics

- Frequency and percentage distribution were used to analyze the demographic variables.
- Mean and standard deviation were used to analyze the level of Pain in pre and post test scores**.**

3.16.2 Inferential Statistics

- Paired “t” test and independent ‘t’ test was used for analyzing the effectiveness of Art therapy on hospitalized children between experimental and control group.
- Chi- Square test was used to find out the association of demographic variables on level of anxiety in experimental group.

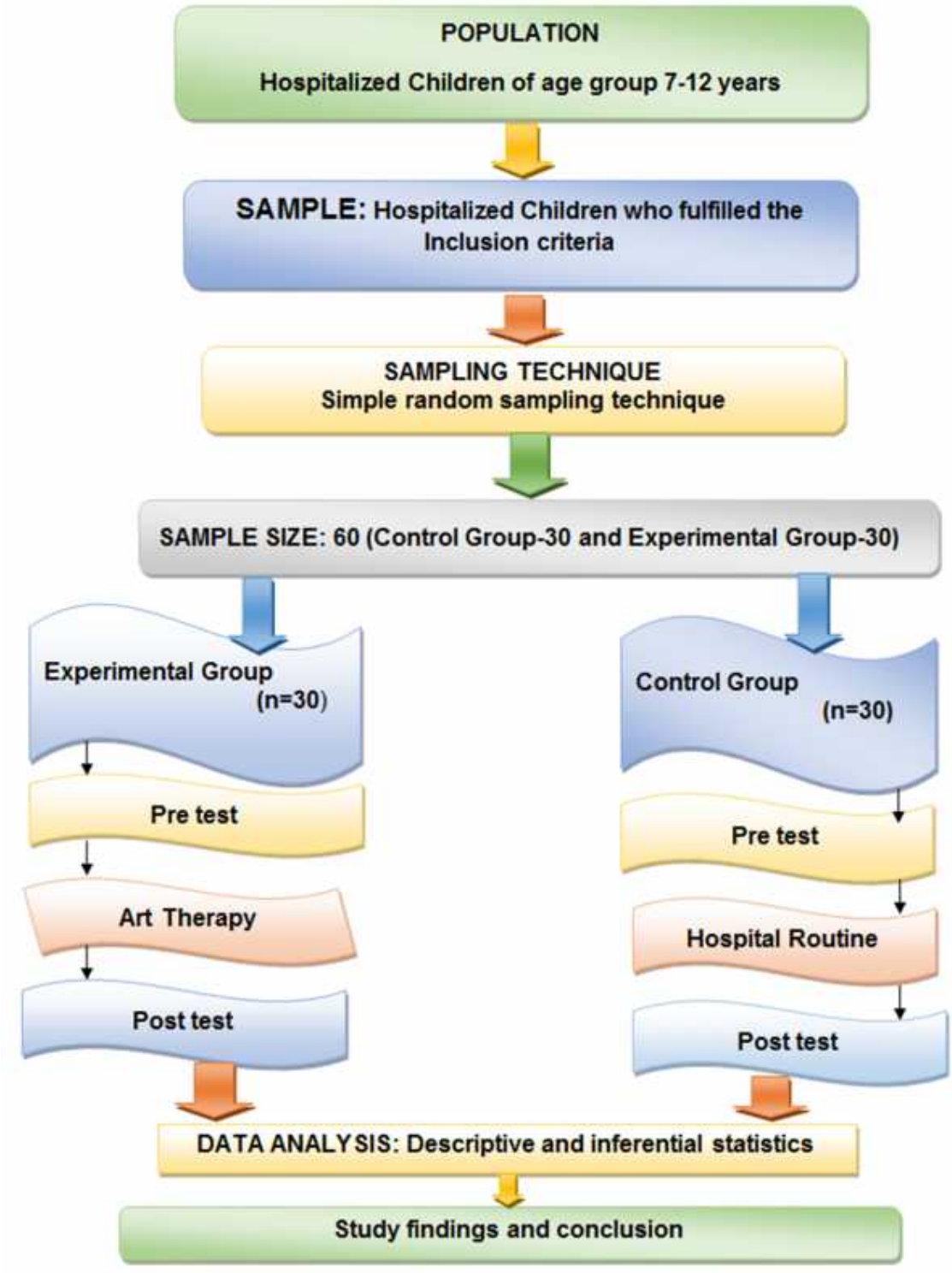

FIGURE 2: SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of the data collected from 60 hospitalized children. The data collected was organized, tabulated and analyzed according to the objectives. The findings based on the descriptive and inferential statistical analysis are presented under the following sections.

ORGANISATION OF THE DATA

Section A: Description of demographic variables of hospitalized children in the experimental and control group.

Section B: Assessment of pretest and post test level of anxiety among hospitalized children in the experimental and control group.

Section C: Effectiveness of dot drawing art therapy on anxiety among hospitalized children within and between the experimental and control group.

Section D: Association of post test level of anxiety among hospitalized children with selected demographic variables in the experimental group.

SECTION A: DESCRIPTION OF DEMOGRAPHIC VARIABLES OF HOSPITALIZED CHILDREN IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 4.1: Frequency and percentage distribution of demographic variables of the hospitalized children in the experimental and control group

N = 60

Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
Age				
7 - 8 years	5	16.67	4	13.33
9 - 10 years	15	50.00	15	50.00
11 - 12 years	10	33.33	11	36.67
Gender				
Male	17	56.67	15	50.00
Female	13	43.33	15	50.00
Religion				
Hindu	13	43.33	11	36.67
Islam	8	26.67	9	30.00
Christian	9	30.00	10	33.33
Others	0	0.00	0	0.00
Education of the child				
3rd to 4th standard	5	16.67	4	13.33
5th to 6th standard	14	46.67	14	46.67
7th & above	11	36.67	12	40.00
Type of family				
Nuclear family	12	40.00	13	43.33
Joint family	14	46.67	11	36.67
Extended family	0	0.00	0	0.00
Single parent family	4	13.33	6	20.00
Father's education				
Illiterate	2	6.67	2	6.67
Primary education	4	13.33	4	13.33
Secondary education	10	33.33	11	36.67
Undergraduate	11	36.67	10	33.33
Post graduate & above	3	10.00	3	10.00
Mother's education				
Illiterate	2	6.67	3	10.00
Primary education	6	20.00	7	23.33
Secondary education	9	30.00	8	26.67
Undergraduate	10	33.33	10	33.33
Post graduate & above	3	10.00	2	6.67

Demographic Variables	Experimental Group		Control Group	
	No.	%	No.	%
Father's occupation				
Government employee	4	13.33	5	16.67
Private employee	16	53.33	15	50.00
Self-employed	6	20.00	7	23.33
Unemployed	4	13.33	3	10.00
Mother's occupation				
Government employee	6	20.00	4	13.33
Private employee	5	16.67	6	20.00
Self-employed	4	13.33	5	16.67
Homemaker	15	50.00	15	50.00
Family income				
Rs.5000 - 10,000 month	8	26.67	7	23.33
Rs.10,000 - 15,000/month	10	33.33	11	36.67
Rs.15,000 - 20,000/month	6	20.00	5	16.67
Above Rs.20,000/month	6	20.00	7	23.33
Duration of hospitalization				
Three days	12	40.00	10	33.33
Four days	14	46.67	14	46.67
Above four days	4	13.33	6	20.00
Presence of caregiver with the child				
Father	3	10.00	4	13.33
Mother	23	76.67	21	70.00
Grand parents	4	13.33	5	16.67
Relatives	0	0.00	0	0.00
Play activities of the child during hospitalization				
Reading books	5	16.67	4	13.33
Playing video games & toys	10	33.33	11	36.67
Drawing	5	16.67	5	16.67
Listening music	10	33.33	10	33.33
Any other activities	0	0.00	0	0.00

The table 4.1 shows that in the experimental group, majority 15(50%) were in the age group of 9 – 10 years, 17(56.67%) were female, 13(43.33%) were Hindus, 14(46.67%) were studying in 5^{th} to 6^{th} standard, 14(46.67%) belonged to joint family, 11(36.67%) fathers were undergraduates, 10(33.33%) mothers were undergraduates, 16(53.33%) fathers were working in private organization, 15(50%) mothers were

homemakers, 10(33.33%) had family monthly income of Rs.10,000 to Rs.15,000/month, 14(46.67) were hospitalized for four days. 23(76.67%) children caregivers were mothers and 10(33.33%) were playing video games & toys and listening music during hospitalization.

Whereas in the control group, majority 15(50%) were in the age group of 9 – 10 years, the gender were equally distributed 50%male and female15(50%) were male and female, 11(36.67%) were Hindus, regarding education 14(46.67%) were studying in 5^{th} to 6^{th} standard, 13(43.33%) belonged to nuclear family, 11(36.67%) fathers had secondary level of education, 10(33.33%) mothers were undergraduates, 15(50%) fathers were working in private organization, 15(50%) mothers were homemakers, 11(36.67%) had family monthly income of Rs.10,000 to Rs.15,000/month, 14(46.67) were hospitalized for four days. 21(70%) children caregivers were mothers and 11(36.67%) were playing video games & toys during hospitalization.

SECTION B: ASSESSMENT OF PRETEST AND POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED CHILDREN IN THE EXPERIMENTAL AND CONTROL GROUP.

Table 4.2: Frequency and percentage distribution of pretest and post test level of anxiety among hospitalized children in the experimental group

n=30

Anxiety	No Anxiety (0)		Little Anxiety (1)		Some Anxiety (2)		High Anxiety (3)		Very High Anxiety (4)	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pretest	0	0	0	0	0	0	13	43.33	17	56.67
Post Test	9	30.0	21	70.0	0	0	0	0	0	0

The table 4.2 shows that in the pretest, majority 17(56.67%) of children had very high level of anxiety and 13(43.33%) had high level of anxiety in the experimental group and whereas in the post test after the Dot Drawing Art therapy majority 21(70%) often had little anxiety and 9(30%) of there showed no evidence anxiety in the experimental group.

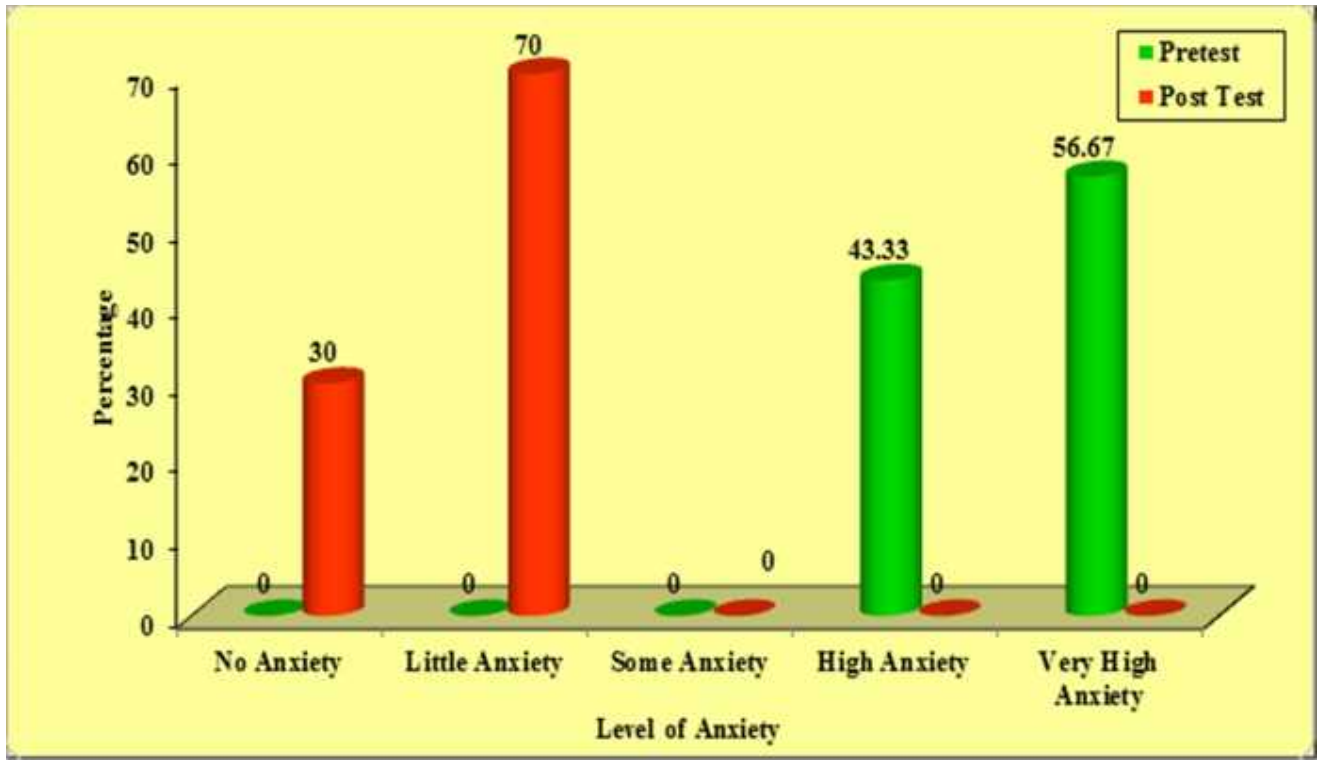

FIGURE 3: PERCENTAGE DISTRIBUTION OF PRETEST AND POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED CHILDREN IN THE EXPERIMENTAL GROUP

Table 4.3: Frequency and percentage distribution of pretest and post test level of anxiety among hospitalized children in the control group

n=30

Anxiety	No Anxiety (0)		Little Anxiety (1)		Some Anxiety (2)		High Anxiety (3)		Very High Anxiety (4)	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Pretest	0	0	0	0	0	0	12	40.0	18	60.0
Post Test	0	0	0	0	0	0	17	56.67	13	43.33

The table 4.3 shows that in the pretest, majority 18(60%) of children had very high level of anxiety and 12(40%) had high level of anxiety in the control group and whereas in the post test, majority 17(56.67%) had high anxiety and 13(43.33%) had very high anxiety in the control group.

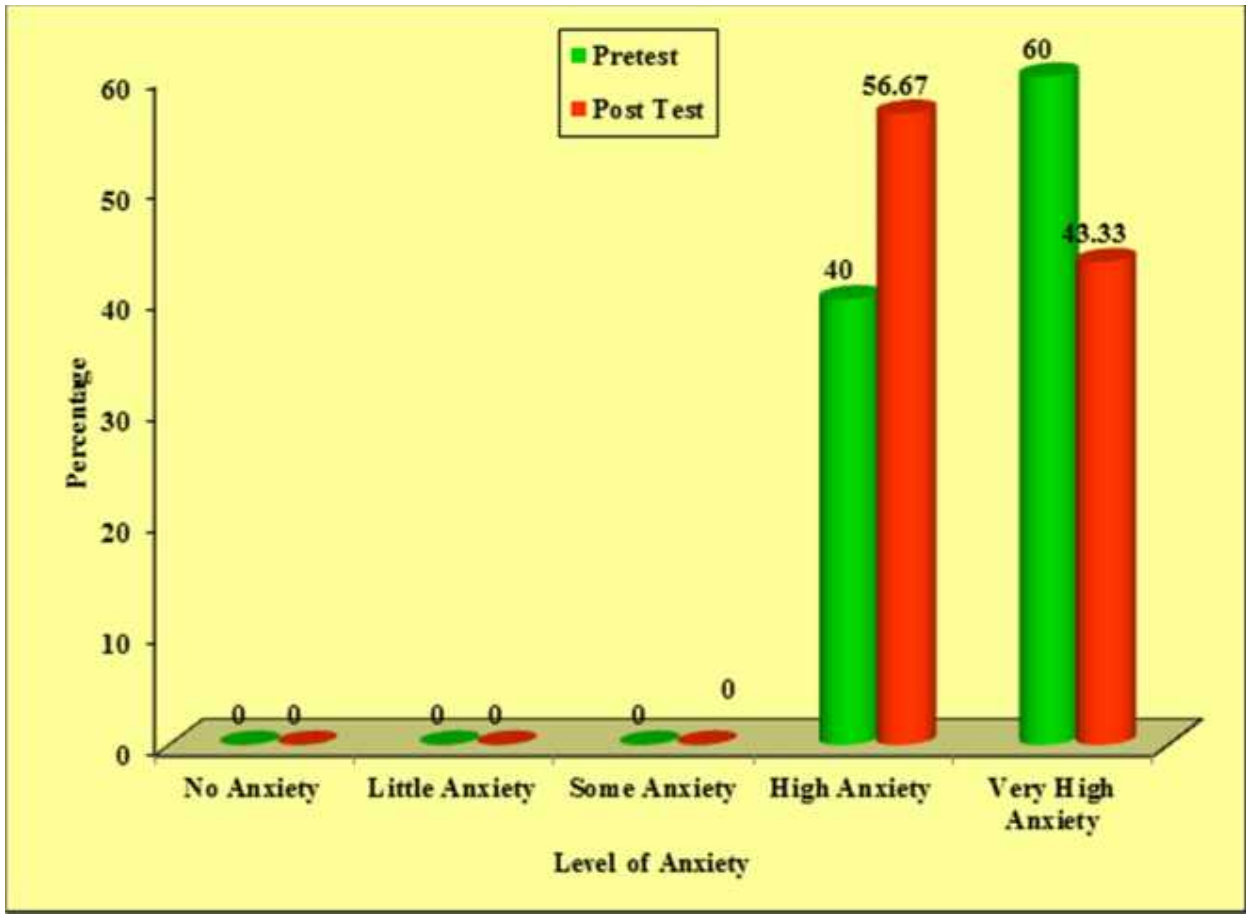

FIGURE 4: PERCENTAGE DISTRIBUTION OF PRETEST AND POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED CHILDREN IN THE CONTROL GROUP

SECTION C: EFFECTIVENESS OF DOT DRAWING ART THERAPY ON ANXIETY AMONG HOSPITALIZED CHILDREN WITHIN AND BETWEEN THE EXPERIMENTAL GROUP.

Table 4.4: Comparison of pretest and post test anxiety scores among hospitalized children in the experimental group.

n = 30

Anxiety	Mean	S.D	Paired 't' Value
Pretest	3.56	0.50	t = 20.232
Post Test	0.70	0.46	p = 0.000, S***

***p<0.001, S – Significant

This table 4.4 shows that the pretest mean score of anxiety among hospitalized children under surgery was 3.56 with S.D 0.50 in experimental group and the post test mean score of anxiety was 0.70 with S.D 0.46. The calculated paired 't' value of t = 20.232 was found to be statistically significant at p<0.001 level. This clearly indicates that after the administration of Dot Drawing Art Therapy the post test level of anxiety was considerably reduced among hospitalized children and this clearly indicates that Dot Drawing Art therapy was found to be effective in reducing the anxiety among hospitalized children in the experimental group.

Table 4.5: Comparison of pretest and post test anxiety scores among hospitalized children in the control group.

n = 30

Anxiety	Mean	S.D	Paired 't' Value
Pretest	3.60	0.49	t = 1.409
Post Test	3.43	0.50	p = 0.169, N.S

The table 4.5 shows that the pretest mean score of anxiety among hospitalized children was 3.60 with S.D 0.49 and the post test mean score of anxiety was 3.43 with S.D 0.50 in control group. The calculated paired 't' value of t = 1.409 was not found to be statistically significant. This clearly indicates that there was no difference in the level of anxiety among hospitalized children in the control group.

Table 4.6: Comparison of post test anxiety scores among hospitalized children between the experimental and control group.

N = 60(30+30)

Post Test Anxiety	**Mean**	**S.D**	**Unpaired 't' Value**
Experimental Group	0.70	0.46	t = 21.808 p = 0.000, S***
Control Group	3.43	0.50	

***p<0.001, S – Significant

The table 4.6 shows that the post test mean score of anxiety among hospitalized children in the experimental group was 0.70 with S.D 0.46 and the post test mean score of anxiety among children in the control group was 3.43 with S.D 0.50. The calculated unpaired 't' value of t = 21.808 was found to be statistically significant at p<0.001 level. This clearly indicated that after the administration of dot drawing art therapy among hospitalized children in the experimental group there was a significant reduction in the level of anxiety than the control group who underwent normal hospital routine measures.

SECTION D: ASSOCIATION OF POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED CHILDREN WITH SELECTED DEMOGRAPHIC VARIABLES IN THE EXPERIMENTAL GROUP.

Table 4.7: Association of post test level of anxiety among hospitalized children with their selected demographic variables in the experimental group.

n = 30

Demographic Variables	No Anxiety (0)		Little Anxiety (1)		Chi-Square Value
	No.	%	No.	%	
Age of the child					$\chi^2 = 1.429$ d.f = 2 p = 0.490 N.S
7 - 8 years	1	3.3	4	13.3	
9 - 10 years	6	20.0	9	30.0	
11 - 12 years	2	6.7	8	26.7	
Sex					$\chi^2 = 0.782$ d.f = 1 p = 0.376 N.S
Male	4	13.3	13	43.3	
Female	5	16.7	8	26.7	
Religion					$\chi^2 = 0.559$ d.f = 2 p = 0.756 N.S
Hindu	3	10.0	10	33.3	
Islam	3	10.0	5	16.7	
Christian	3	10.0	6	20.0	
Others	-	-	-	-	
Education of the child					$\chi^2 = 2.672$ d.f = 2 p = 0.263 N.S
3rd to 4th standard	3	10.0	2	6.7	
5th to 6th standard	3	10.0	11	36.7	
7th & above	3	10.0	8	26.7	
Type of family					$\chi^2 = 0.125$ d.f = 2 p = 0.940 N.S
Nuclear	4	13.3	8	26.7	
Joint	4	13.3	10	33.3	
Extended family	-	-	-	-	
Single parent family	1	3.3	3	10.0	
Father's education					$\chi^2 = 1.436$
Illiterate	0	0	2	6.7	

Demographic Variables	No Anxiety (0)		Little Anxiety (1)		Chi-Square Value
	No.	%	No.	%	
Primary education	1	3.3	3	10.0	d.f = 4
Secondary education	4	13.3	6	20.0	p = 0.838
Undergraduate	3	10.0	8	26.7	N.S
Post graduate & above	1	3.3	2	6.7	
Mother's education					
Illiterate	1	3.3	1	3.3	$\chi^2 = 3.069$
Primary education	3	10.0	3	10.0	d.f = 4
Secondary education	1	3.3	8	26.7	p = 0.546
Undergraduate	3	10.0	7	23.3	N.S
Post graduate & above	1	3.3	2	6.7	
Father's occupation					$\chi^2 = 2.520$
Government employee	2	6.7	2	6.7	d.f = 3
Private employee	5	16.7	11	36.7	p = 0.472
Self-employed	2	6.7	4	13.3	N.S
Unemployed	0	0	4	13.3	
Mother's occupation					
Government employee	2	6.7	4	13.3	$\chi^2 = 2.698$
Private employee	1	3.3	4	13.3	d.f = 3
Self-employed	0	0	4	13.3	p = 0.440
Homemaker	6	20.0	9	30.0	N.S
Family income					
Rs.5000 - 10,000 month	0	0	8	26.7	$\chi^2 = 5.714$
Rs.10,000 - 15,000/month	3	10.0	7	23.3	d.f = 3
Rs.15,000 - 20,000/month	3	10.0	3	10.0	p = 0.126
Above Rs.20,000/month	3	10.0	3	10.0	N.S
Duration of hospitalization					$\chi^2 = 4.490$
Three days	3	10.0	9	30.0	d.f = 2
Four days	3	10.0	11	36.7	p = 0.106
Above four days	3	10.0	1	3.3	N.S
Presence of caregiver with the child					$\chi^2 = 0.945$
Father	1	3.3	2	6.7	d.f = 2

Demographic Variables	No Anxiety (0)		Little Anxiety (1)		Chi-Square Value
	No.	%	No.	%	
Mother	6	20.0	17	56.7	p = 0.623 N.S
Grand parents	2	6.7	2	6.7	
Relatives	-	-	-	-	
Play activities of the child during hospitalization					χ^2 = 1.429 d.f = 3 p = 0.699 N.S
Reading books	2	6.7	3	10.0	
Playing video games & toys	2	6.7	8	26.7	
Drawing	1	3.3	4	13.3	
Listening music	4	13.3	6	20.0	
Any other activities	-	-	-	-	

**p<0.01, S – Significant, N.S – Not Significant

The table 4.7 shows that none of the demographic variables had shown statistically significant association with the post test level of anxiety among hospitalized children in the experimental group.

DISCUSSION

This chapter discusses the major findings of the study and reviews them in relation to finding from other studies.

The aim of the study was to assess the effectiveness of Art Therapy on anxiety level among hospitalized children in Chettinad Hospital Chennai.

In this study true experimental design was adopted. Sixty samples who fulfill the inclusive criteria were selected by simple random sampling, and were assessed.

Demographic data was collected by using a questionnaire. Intervention with art therapy for a duration of 20 Minutes/day for 3 days was given to explain control group. The control group received hospitalized children counseling as a hospital routine care. Post assessment level of hospitalized anxiety on third days by using five facial anxiety scale.

The data was organized and analyzed and the major results of the study are discussed according to the objectives.

5.1 THE RESULTS ARE DISCUSSED AS FOLLOWS:

Analysis of frequency and percentage of demographic variables.

Majority of the samples 15(50%) were in the age group of 9 – 10 years. Females were 17(56.67%). 13(43.33%) of samples were Hindus. 14(46.67%) were studying in 5th to 6th standard, 14(46.67%) belonged to joint family, 11(36.67%) fathers were undergraduates, 10(33.33%) mothers were undergraduates, 16(53.33%) fathers were working in private organization, 15(50%) mothers were homemakers, 10(33.33%)

had family monthly income of Rs.10,000 to Rs.15,000/month, 14(46.67) were hospitalized for three days. 23(76.67%) children caregivers were mothers and 10(33.33%) were playing video games & toys and listening music during hospitalization.

5.2 THE FINDINGS OF THE STUDY BASED ON THE OBJECTIVES ARE:

5.2.1 The first objective was the assessment of pretest and post test level of anxiety among hospitalized children in the experimental and control group.

Frequency and percentage distribution of pretest and post test level of anxiety among hospitalized children in the experimental group

The analysis showed that in the pretest, majority 17(56.67%) of children had very high level of anxiety and 13(43.33%) had high level of anxiety in the experimental group and whereas in the post test after the dot drawing art therapy majority 21(70%) of the had little anxiety and 9(30%) of them had no anxiety in the experimental group.

Frequency and percentage distribution of pretest and post test level of anxiety among hospitalized children in the control group

Furthermore in the pretest, majority 18(60%) of children had very high level of anxiety and 12(40%) had high level of anxiety in the control group and whereas in the post test, majority 17(56.67%) had high anxiety and 13(43.33%) had very high anxiety in the control group.

This finding is supported by **Akca SO et.al, 2015** cross sectional and quasi-experimental study included a total of 100 patients aged 7-12 years admitted for inguinal hernia surgery, 50 of them were the control group and 50 the experiment group. The data was gathered using the patients' identification forms and a child steady state anxiety scale.

Research data was evaluated with appropriate statistical methods. The groups showed similar socio-demographic features and no statistically significant difference was observed ($p>0.05$). During the pre-op period neither of the groups showed any statistically significant difference in terms of both state and trait anxiety levels ($p>0.05$), however the experiment group showed a statistically significant drop in their anxiety levels during the post-op period ($p<0.05$).

5.2.2 The second objective was to assess the effectiveness of art therapy on anxiety among hospitalized children within and between the experimental and control group.

Comparison of pretest and post test anxiety scores among hospitalized children in the experimental group.

The findings showed that the pretest mean score of anxiety among hospitalized children was 3.56 with S.D 0.50 and the post test mean score of anxiety was 0.70 with S.D 0.46. The calculated paired 't' value of $t = 20.232$ was found to be statistically significant at $p<0.001$ level. This clearly indicates that after the administration of Dot Drawing Art Therapy the post test level of anxiety was considerably reduced among hospitalized children and this clearly indicates that dot drawing Art therapy was found to be effective in reducing the anxiety among hospitalized children in the experimental group.

Comparison of pretest and post test anxiety scores among hospitalized children in the control group.

This result showed that the pretest mean score of anxiety among hospitalized children was 3.60 with S.D 0.49 and the post test mean score of anxiety was 3.43 with S.D 0.50. The calculated paired 't' value of $t = 1.409$ was not found to be statistically significant. This clearly indicated that there was no difference in the level of anxiety among hospitalized children in the control group.

Comparison of post test anxiety scores among hospitalized children between the experimental and control group.

The result showed that the post test mean score of anxiety among hospitalized children in the experimental group was 0.70 with S.D 0.46 and the post test mean score of anxiety among children in the control group was 3.43 with S.D 0.50. The calculated unpaired 't' value of t = 21.808 was found to be statistically significant at $p<0.001$ level. This clearly indicates that after the administration of Dot Drawing Art Therapy among hospitalized children in the experimental group there was a significant reduction in the level of anxiety than the hospitalized children in the control group who underwent normal hospital routine measures.

This finding is supported by **David Alan Sandmire 2012** study examining the psychological effects of art therapy in a 57 samples. The State-Trait Anxiety Inventory was administered before and after Art Therapy. The mean state anxiety score between pre-test and post-test decreased significantly in the art-therapy group, whereas no difference was found in the control group. Similarly, the mean trait anxiety score between pre-test and post-test in the art-therapy group was significantly lower, and no difference was observed in the control group. These findings suggested that a brief period of art therapy can significantly reduce a person's state of anxiety.

5.2.3 The third objective of the study was to find out the association of post test level of anxiety among hospitalized children with their selected demographic variables in the experimental group.

The result showed that none of the demographic variables had shown statistically significant association with the post-test level of anxiety among hospitalized children in the experimental group.

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

This chapter summarizes the findings, and interpretation of results and presents recommendations that need to be incorporated in nursing practice, nursing education, nursing administration, and nursing research.

6.1 SUMMARY

The objectives of the study,

- Assess the pre-test level and post-test of Anxiety among hospitalized children in both experimental and control group before Art Therapy.
- Assess the effectiveness of art therapy on anxiety of child in the experimental group
- Associate the selected demographic with the pre and post level of anxiety among hospitalized children in both experimental group

The research hypothesis,

H1 There is a significant difference between the pre and post test level of anxiety among hospitalized children in experimental and control group.

H2 There is a significant association in the post test level of anxiety among hospitalized children in experimental group with the selected demographic variables.

Review of literature,

i) Literature related to Hospitalized anxiety.

ii) Literature related to art therapy.

iii) Lrelated to anxiety and art therapy.

The conceptual framework for this study was General System Theory of Karl Ludwig Von Bertalanffy. True experimental design was used with pre test and post test control group design. Randomization was done with simple random sampling technique using lottery method for both experimental and control group with 30 samples in experimental and control group each.

The study was conducted in Chettinad Hospital, Kelambakkam, Chennai. The tool consisted of structured questionnaire to elicit the demographic variables and Five facial anxiety scale was used to assess the level of anxiety. The tool was validated by 3 experts and the validity of the tool was established. The reliability of the tool was found (r=0.08) by test retest method, and the tool was considered as fit for proceeding with pilot study.

A Pilot study was conducted to assess the feasibility, practicability of the study and six patients were selected who fulfilled the inclusion criteria. The intervention had an appreciable decrease in the level of anxiety among hospitalized children. There was no ambiguity in language in the tool and the tool was found feasible.

After getting the consent, the pre-test level of hospitalized anxiety was assessed by using five facial anxiety scale in experimental and control group. Art therapy was provided for the experimental group at the duration of 20 Minutes/day for 3 days. The control group received

hospitalized children counseling as a hospital routine care. The data was analyzed using descriptive and inferential statistics.

The analysis revealed that the post test mean score of anxiety among hospitalized children in the experimental group was 0.70 with S.D 0.46 and the post test mean score of anxiety among children in the control group was 3.43 with S.D 0.50. The calculated unpaired 't' value of t = 21.808 was found to be statistically significant at $p<0.001$ level.

Thus clearly indicating that after the administration of Dot Drawing Art Therapy among hospitalized children in the experimental group there was a significant reduction in the level of anxiety than the hospitalized children in the control group who underwent normal hospital routine measures.

The result showed that none of the demographic variables had shown statistically significant association with the post-test level of anxiety among hospitalized children in the experimental group. Hence the stated research Hypothesis (H2) was rejected.

6.2 CONCLUSION

Anxiety is one of the most common experience of every hospitalised child, it adversely affects the course of hospital stay and affects the quality of nursing care as well. Art therapy reduces the anxiety in the hospitalised child. This study highlighted the effectiveness of art therapy in reducing anxiety among hospitalised children, and thereby improves the quality care during hospital stay.

Study findings showed that after the administration of Dot Drawing Art Therapy among hospitalized children there was a significant reduction in the level of anxiety and thus promoted the cooperation of children with nurses

6.3 IMPLICATIONS

This section of the research report that focuses on Nursing implications, which includes specific suggestions for Nursing practice, Nursing education, Nursing administration and Nursing research.

6.3.1 Nursing implication

According to the finding of the study, majority of the children who were hospitalized experienced considerably reduced level of anxiety after intervention with Art Therapy. Therefore, nurses have the responsibility in following diversion techniques in children to reduce hospitalized anxiety for which Art therapy will be an effective tool. The findings of the study can be incorporated in nursing education, practice and administration for quality pain management care.

6.3.2 Nursing education

- A Continuing nursing education program can be arranged on Art therapy.
- Art therapy is a non-pharmacological intervention that can be integrated with nursing curriculum.
- In service education can be given to staff Nurses and faculty members regarding Art therapy in order to upgrade the cognitive and psychomotor skills.
- Nursing students from various levels must be educated about the Art therapy in order to practice in the clinical settings.
- A nurse educator should encourage the students for effective utilization of research based practice.

- A nurse educator should make use of available literatures and studies related to the measures of reducing hospital anxiety among children

6.3.3 Nursing practice

- Nurses should develop skill in implementing Art therapy.
- Nurses should create awareness and motivate others in the team to use this approach in reducing the anxiety among hospitalised children.
- Teach the staff nurses about the effectiveness of Art therapy to reduce anxiety among hospitalised children.
- Art therapy can be used as a Nursing intervention in reducing anxiety among hospitalised children during their hospital stay.
- Nurses can apply this technique as a diversion therapy to relax the child like play therapy.
- Art therapy facilitates communication between staff and children and encourages the child's co-operation in Hospital procedure.

6.3.4 Nursing administration

- The Nurse administrator should aware of importance and benefit of Art therapy in reducing hospital anxiety in children.
- Art therapy is one of the best, non-pharmacological and cost effective intervention for hospitalised children.
- It can be easily administered by the health care worker in their practice to alleviate anxiety.

- Nurse administer can instruct and encourage their subordinates to utilize this as a nursing intervention in their clinical settings.
- Arrange and conduct workshop, conference and seminars on hospital anxiety reduction and its management in children.

6.3.5 Nursing research

- As a nurse researcher, promote more research on reducing anxiety among children.
- Art therapy studies are rare in nursing field. So the Nurse researcher can conduct similar studies related to Art therapy. This will help the Nurses to Evidence Based Practice in this aspect.
- Disseminate the findings of the research through conferences, seminars and publishing in nursing journal.
- Promote effective utilization of research findings on management of anxiety among children.

6.4 RECOMMENDATIONS

Based on findings of the study the investigator proposed the following recommendations,

- The same study can be done with large sample size so that the results can be generalized.
- Comparison of Art therapy with other types of relaxation techniques like music therapy and play therapy can be done.
- A study to assess the Knowledge and Practice of Medical and Paramedical personnel's regarding Art therapy can be assessed.

- A study can be conducted to assess the awareness and practice on Art therapy on hospital anxiety among paediatric staff Nurses.
- The same study can be done on different settings.
- A similar study can be done by increasing time duration and using different themes of Art therapy.
- Comparative study can be done to assess the effectiveness of Mozart music intervention between children of different age groups.
- Comparative study can be done to assess the effectiveness of Mozart music with other non-pharmacological interventions for pain management.

6.5 LIMITATIONS

- The investigator found difficulty in getting adequate literature related to the study in Indian setting.
- Due to time constrains, the investigator was unable to take large samples for the study.

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APPENDIX –A

ETHICAL CLEARANCE CERTIFICATE

VENKATESWARA NURSING COLLEGE

(A unit of **VELS Group**, Pallavaram)

Approved by Indian Nursing Council, (Cert. No. 18-29/3458-INC) and Tamil Nadu Nurses & Midwives Council
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University

Thalambur, Off Old Mahabalipuram Road, Near Navalur, Chennai - 603 103
Phone : (91-44) 3253 7098 / 2743 5060 Fax : (91-44) 2743 5059

Prof. Mrs. Kamala Subbian M.Sc. (N), M.A. (Soc.)
Principal
(Former Dy. Director of Medical Education - Nursing)

Institutional Ethics Committee Certificate of Approval

To,

Mr. S. Bibin Raj
M.Sc (N) I year,
Venkateswara Nursing College,
(A unit of VELS,Group, Pallavaram),
Thalambur, Chennai – 603103

Dear Mr. S. Bibin Raj

The institutional Ethics Committee of Venkateswara Nursing College reviewed and discussed your application for the approval of the proposal entitled **"A study to assess the Effectiveness of Art therapy on anxiety level among Hospitalised children at a selected Hospital, Chennai."**

The following members of Ethics committee were present in the meeting held on 04.03.14 at Venkateswara Nursing College, Chennai 603103.

Ethics Committee

Chair Person	Prof. Kamala Subbian	Principal, Venkateswara Nursing College, Chennai	
Member Secretary	Dr. N. Jaya	– Professor & HOD, OBGN & Research, VNC	
Members	Dr. G. Ilangovan	– Medical Director, Shri Isari Velan Mission Hospital	
	Dr. Lodd Mahendra	– Principal SVDC&H	
	Dr. R.S. Rajalakshmi	– Professor & HOD, Bio chemistry SVDC&H	R.S. Rajalakshmi
	Dr. P. Govindaraj	– Special Officer Vels University	
	Dr. R. Sivakumar	– Writer	
	Mr. C. Saravanan	– Advocate – Legal Expert	
	Dr. P. Senthil Selvam	– Principal – BPT Vels University	
	Mr. V. S Ravi	– AO - SVDC&H & VNC	
	Mr. D. Sathish	Social Science Representative	

We Approve the proposal to be conducted in its presented form

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study, any changes in the protocol and patient information /informed consent and also to be provided a copy of the Final report

Member Secretary, Ethics Committee

Venkateswara Nagar, (Opp. G.S. Complex), Nandanam, Chennai - 600 035.
Phone / Fax : (91-44) 2431 5641 / 2431 5542

APPENDIX –B

LETTER SEEKING AND GRANTING PERMISSION FOR CONDUCTING MAIN STUDY

Dean / 603 / 17.12.14.

Chettinad
Academy of Research & Education
(Deemed to be University Under sec. 3 of the UGC Act 1956)

Ref. No. 420/Regr./DR – Admin/ 2014- 12 Dated: 17.12.2014

To
The Dean,
Chettinad Hospital and Research Institute.
Sir,

Sub: Chettinad Academy of Research and Education – Chettinad Hospital and Research Institute – Venkateshwara Nursing College – To undergo study in Paediatric Department for their two students – permission requested– Orders issued.

Ref: Letter dated 09.12.2014 received from the Principal, Venkateshwara Nursing College , Thalambur.

---oOo---

In response to the letter forwarded by the Dean, Chettinad Hospital and Research Institute permission is here by accorded to two Students of Venkateshwara Nursing College, Thalambur to undergo study in paediatric Department from 15.12.2014 to 15.01.2015 in Chettinad Hospital & Research Institute on payment of Rs.1,500/- (Rupees One Thousand and Five Hundred only) per student.

This permission is accorded subject to the following conditions:

1. They should not be allowed to take photographs / videographs.
2. They should use only college laboratories and not use the hospital laboratories.
3. They should not violate the rules and regulations of the Chettinad Academy of Research and Education.
4. They are permitted to act as per the Head of the Department instructions in the hospital.
5. They are also instructed that if any damage occurs, the cost shall have to be reimbursed by them.

Yours faithfully,

Registrar

Copy submitted to Vice Chancellor

17/12/14 Copy to:

1. The Finance Officer
2. Medical Superintendent
3. Head – Infrastructure
4. AGM – Admin

APPENDIX –C

(i) LETTER SEEKING EXPERT'S OPINION FOR CONTENT VALIDITY

From

Bibin Raj. S,

Msc Nursing I Year,

Venkateswara Nursing College,

Thalambur, Chennai.

To

Respected sir/madam,

Subject: Requisition from expert opinion for content validity.

I am Bibin Raj. S doing my M.sc nursing I year specializing Child Health Nursing at Venkateswara Nursing College. As a part of my research project to be submitted to the Tamilnadu Dr.M.G.R medical University and in partial fuilfillment of the university requirement for the award of M.sc Nursing degree, I am conducting **"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children in Chettinad Hospital Chennai"** I have enclosed my intervention tool for your expert guidance and validation. Kindly do the needful.

Thanking you,

Yours faithfully,

(BIBIN RAJ.S)

ENCLOSURES:

1. Statement and objective of the study
2. Intervention tool
3. Data collection tool
4. Content validity form
5. Certificate for content validity

(ii)LIST OF EXPERTS

1) **Dr. UMA DEVI. L, M.D., D.C.H**
Professor & HOD, Dept. of Paediatrics
Chettinad Hospital and Research Institute,
Chettinad Health City Campus, Rajiv Gandhi Salai,
Kelambakkam, Kancheepuram Dist – 603103.

2) **Dr. SUMMANT, MD**
Kanchi Kamakoti Child Trust Hospital,
12,A Nageswara Road
Nungambkkam
Chennai-600034

3) **Dr. ANITHA RAJENDRABABU, M.Sc (N), PhD,**
Prinicipal,
Rajalakshmi college of Nursing,
Thandalam, Chennai -602105.

4) **PROF. MRS. K. DEEPA M.Sc (N),**
HOD of Child Health Nursing,
Mohamed Sathak College of Nursing
34, Rajiv Gandhi Road,
Chennai- 603103

5) **PROF.MARY VINOLIN, M.Sc (N),**
HOD of Child Health Nursing,
Saveetha College of Nursing,
Thalambur, Chennai-600130

(iii)CERTIFICATE FOR CONTENT VALIDITY

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Mr BIBIN RAJ,** M.sc Nursing II year student of VENKATESWARA NURSING COLLEGE, Thalambur, Chennai- 600130. On thesis entitled "**A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children at selected Hospital Chennai."** The tool is validated by the undersigned person and he can proceed with this tool to conduct the main study.

Signature:

Name : Sumant P. Prabhudesai

Seal KANCHI KAMAKOTI CHILDS TRUST HOSPITAL
12 A NAGESWARA ROAD
NUNGAMBKKAM
CHENNAI-600 034

Date 29.11.2014

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Mr BIBIN RAJ,** M.sc Nursing II year student of VENKATESWARA NURSING COLLEGE, Thalambur, Chennai- 600130. On thesis entitled **"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children at selected Hospital Chennai"** The tool is validated by the undersigned person and he can proceed with this tool to conduct the main study.

Signature: Deepa.

Name : K. DEEPA

Seal :

Date : 6.12.14.

MOHAMED SATHAK A.J. COLLEGE OF NURSING
34, Rajiv Gandhi Road, Chennai-603 103.

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Mr BIBIN RAJ,** M.sc Nursing II year student of VENKATESWARA NURSING COLLEGE, Thalambur, Chennai- 600130. On thesis entitled **"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children at selected Hospital Chennai"** The tool is validated by the undersigned person and he can proceed with this tool to conduct the main study.

Signature:

Name : Dr ANITHA RAJENDRABABU, M.Sc (N) Ph.D
PRINCIPAL
RAJALAKSHMI COLLEGE OF NURSING
THANDALAM. CHENNAI-602 105.

Seal :

Date : 5.12.2014.

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Mr BIBIN RAJ,** M.sc Nursing II year student of VENKATESWARA NURSING COLLEGE, Thalambur, Chennai- 600130. On thesis entitled **"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children at selected Hospital Chennai"** The tool is validated by the undersigned person and he can proceed with this tool to conduct the main study.

Signature: Y. Mary Mirnolia

Name : Y. Mary Mirnolia

Seal : HEAD OF THE DEPARTMENT
DEPARTMENT OF CHILD HEALTH NURSING
SAVEETHA COLLEGE OF NURSING
SAVEETHA UNIVERSITY
THANDALAM-602 105

Date : 5/12/14

APPENDIX-D

CERTIFICATE FOR ENGLISH EDITING

CERTIFICATE OF ENGLISH EDITION

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation work **A STUDY TO ASSESS THE EFFECTIVENESS OF ART THERAPY ON ANXIETY LEVEL AMONG HOSPITALIZED CHILDREN AT A SELECTED HOSPITAL, CHENNAI** done by Mr.Bibin Raj, M.Sc(N) II year, Venkateswara Nursing College, Thalambur, Chennai 603103, has been edited by me and the use of English in the dissertation is found appropriate.

GOVT. BOYS HR. SEC. SCHOOL
1.8.15
THIRUKKALUKUNDRAM

S.JANARTHANAN
M.Sc.,M.Ed.,M.Phil.,
HEADMASTER
Govt.Boys Hr.Sec.School
Thirukkazhukundram-603109
Kancheepuram Dist.

Signature

APPENDIX-E

(i) INFORMED CONSENT REQUISITION FORM

Good Morning!

I am Bibin Raj.S. M studying M.sc (Nursing) at Venkateswara Nursing College, Thalambur, Chennai. As a part of fuilfillment of the programme, I am conducting **"A Study to assess the effectiveness of Art Therapy on anxiety level among hospitalized children in Chettinad Hospital Chennai"**

I request you to participate in this study by giving your written consent and valuable responses to the questions asked. Your responses will be kept confidential and will be used only for the research study.

Thanking you,

Signature of the Investigator

(BIBIN RAJ.S)

(ii) INFORMED CONSENT FORM

I understand that I am being asked to participate in a research study conducted by Mr. Bibin Raj.S, M.sc (N) student of Venkateswara Nursing College. This research study will evaluate the effectiveness of Art therapy on anxiety level among hospitalized children in Chettinad Hospital, Chennai. If I agree to participate in the study and no identifying information will be included when it is transcribed. I understand that there are no risks associated with this study.

I realize that I may participate in the study if I am younger than 18 years of age with consent from my parents/ guardian. I have been explained about Art therapy. It has been informed that the intervention is not going to cause any harm to me. I understand that all the personal information about me will be maintained confidentially and I can withdraw from the study at any time where I feel uncomfortable. I am willing to participate in your study.

Consent:

The above information regarding the study has been read by me and has been explained to me by the investigator from the Venkateswara Nursing College. Having understood the same, I hereby give my consent to participate in the study. I affixing my signature to indicate my consent and willingness that I will cooperate in this study.

_____ _____

Signature of the participant: **Date:**

_____ _____

Signature of the Investigator: **Date:**

APPENDIX-F

SECTION A: DEMOGRAPHIC DATA

1. Age

   7-8 years
   8-10 years
   10-12 years

2. Gender

   Male
   Female

3. Religion

   Hindu
   Islam
   Christian
   Others

4. Education of the child

   1st to 2nd -standard
   3rd to 4th -standard
   5th to 6th –standard
   7th &above

5. Type of family

   Nuclear family
   Joint family
   Extended family
   Single parent family

6. Father's education

   Illiterate
   Primary education
   Secondary education
   Under graduate
   Post graduate & above

7. Mother's education

   Illiterate
   Primary education
   Secondary education

Under graduate
Post graduate & above

8. Father's occupation

Government employee
Private employee
Self-employed
Unemployed

9. Mother's occupation

Government employee
Private employee
Self-employed
Home maker

10. Family income

Rs.5000 -10,000/ month
Rs.10,000 - 15,000/ month
Rs.15,000 -20,000/ month
Above Rs.20,000/month

11. Duration of hospitalization

Two days
Three days
Four days
Above four days

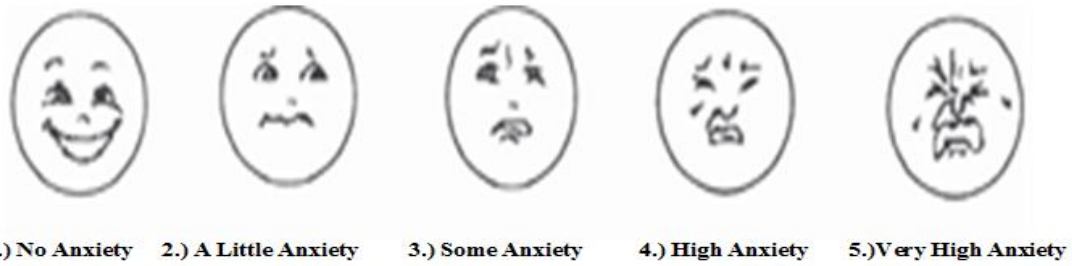
12. Presence of caregiver with the child

Father
Mother
Grand parents
Relatives

13. Play activities of the child during hospitalization

Reading books
Playing video games & toys
Drawing
Listening music
Any other activities

SECTION B: FACIAL AFFECTIVE SCALE



1.) No Anxiety 2.) A Little Anxiety 3.) Some Anxiety 4.) High Anxiety 5.)Very High Anxiety

Score interpretation

The fulfilled criteria of equidistance regression in the expressive elements of eyebrows eyelids tears& smile. (It respective the degree of emotional intensity)

- **No anxiety =** smiling face **(score 1)**
- **A little anxiety =** Frowning face **(score 2)**
- **Some anxiety =** Frowning and wailing **(score 3)**
- **High anxiety =** Wailing with eyes closed and tears **(score 4)**
- **Very High anxiety =** Frowning with eyes closed with tears wailing And mouth turned down **(score 5)**

APPENDIX-G

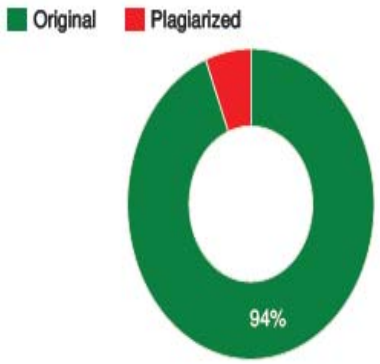
PLAGIARISM REPORT

Plagiarism-Checker.org - Originality Report:

Analyzed document:

plagerism.docx

Plagiarism\Original\Referenced relations chart:



Distribution graph:

Important Notes:			
Wikipedia:	Google Books:	Ghost Services:	Cheating:
[not detected]	[not detected]	[not detected]	[not detected]

APPENDIX-H

CODING FOR DEMOGRAPHIC VARIABLES

	Demographic Data No.	Code
1.	Age	
	6-8 years	1
	8-10 years	2
	10-12 years	3
2.	Gender	
	Male	1
	Female	2
3.	Religion	
	Hindu	1
	Islam	2
	Christian	3
	Others	4
4.	Education of the child	
	1st to 2nd -standard	1
	3rd to 4th -standard	2
	5th to 6th –standard	3
	7th &above	4
5.	Type of family	
	Nuclear family	1
	Joint family	2
	Extended family	3
	Single parent family	4
6.	Father's education	
	Illiterate	1
	Primary education	2
	Secondary education	3
	Under graduate	4
	Post graduate & above	5

7. Mother's education

Illiterate	1
Primary education	2
Secondary education	3
Under graduate	4
Post graduate & above	5

8. Father's occupation

Government employee	1
Private employee	2
Self-employed	3
Unemployed	4

9. Mother's occupation

Government employee	1
Private employee	2
Self-employed	3
Home maker	4

10. Family income

Rs.5000 -10,000/ month	1
Rs.10,000 - 15,000/ month	2
Rs.15,000 -20,000/ month	3
Above Rs.20,000/month	4

11. Duration of hospitalization

Two days	1
Three days	2
Four days	3
Above four days	4

12. Presence of caregiver with the child

Father	1
Mother	2
Grand parents	3
Relatives	4

13. Play activities of the child during hospitalization

Reading books	1
Playing video games & toys	2
Drawing	3
Listening music	4
Any other activities	5

APPENDIX-I

BLUE PRINT

S.No	Content	Item	Total Item	Percentage
1	Demographic Variables	1-13	13	100%
2	Facial affective scale	0-5	5	100%